

CLAIMS

1. A photosensitive drum assembly for an image forming apparatus, comprising:
  - a drum defining first and second open ends;
  - a flange partially disposed in the first open end; and
  - a grounding plate assembly comprising a drum contact member and a shaft contact member, the drum contact member configured to remove an electrically resistive coating from an interior of the drum, and the shaft contact member configured to contact a grounding shaft, the shaft contact member disposed entirely within an interior of the flange.
2. The photosensitive drum assembly according to claim 1, further comprising:
  - a shaft disposed through a void defined in the flange, the shaft and the grounding plate providing a grounding path for the interior of the drum.
3. The photosensitive drum assembly according to claim 2, wherein the grounding plate comprises a plurality of drum contact members, at least one of the drum contact members configured to remove the electrically resistive coating.
4. The photosensitive drum assembly according to claim 3, wherein at least one of the drum contact members has a length longer than the other drum contact members.
5. The photosensitive drum assembly according to claim 1, wherein the grounding plate comprises a conductive plate and a plurality of drum contact members radially protruding from an outer periphery of the conductive plate.
6. The photosensitive drum assembly according to claim 5, wherein the plurality of drum contact members comprises at least three circumferentially spaced drum contact members.

7. The photosensitive drum assembly according to claim 6, wherein the plurality of drum contact members comprises at least five circumferentially spaced drum contact members, and wherein a first one of the drum contact members has a first length, and a pair of the drum contact members has a second length, and wherein the first length is larger than the second length.
8. The photosensitive drum assembly according to claim 7, wherein the flange defines a first recess, and wherein the first drum contact member is disposed adjacent to the first recess.
9. The photosensitive drum assembly according to claim 1, wherein the grounding plate comprises a planar portion and a plurality of drum contact members bent relative to the planar portion.
10. The photosensitive drum assembly according to claim 1, wherein the shaft contact member is bent.
11. The photosensitive drum assembly according to claim 10, wherein the grounding plate comprises a plurality of shaft contact members.
12. The photosensitive drum assembly according to claim 11, wherein the grounding plate comprises two shaft contact members.
13. The photosensitive drum assembly according to claim 12, wherein free ends of the two shaft contact members are disposed between a surface of the interior of the flange and a planar surface of the grounding plate.
14. The photosensitive drum assembly according to claim 1, wherein the flange comprises a gear surface.
15. The photosensitive drum assembly according to claim 14, wherein the flange comprises a plastic and the grounding plate comprises a metal.

16. The photosensitive drum assembly according to claim 1, wherein the flange comprises a gear surface formed on a portion disposed outside of the drum, and wherein the flange defines an aperture configured to receive a grounding shaft.

17. An image forming apparatus including a drum assembly, the drum assembly comprising:

a drum defining first and second open ends;  
a flange disposed in the first open end; and  
a grounding plate assembly comprising a drum contact member and a shaft contact member, the drum contact member configured to remove an electrically resistive coating from an interior of the drum, and the shaft contact member configured to contact a grounding shaft, the shaft contact member disposed entirely within an interior of the flange.

18. The image forming apparatus according to claim 17, wherein the grounding plate comprises a plurality of drum contact members, wherein at least one of the drum contact members has a length longer than the other drum contact members.

19. The image forming apparatus according to claim 17, wherein the grounding assembly comprises a conductive plate, and wherein a plurality of drum contact members radially protrude from an outer periphery of the conductive plate.

20. The image forming apparatus according to claim 19, wherein the drum contact members comprises at least five circumferentially spaced contact members, and wherein a first one of the drum contact members has a first length, and a pair of drum contact members has a second length, and wherein the first length is larger than the second length.

21. The image forming apparatus according to claim 20, wherein the flange defines a first recess, and wherein the first drum contact member is disposed adjacent to the first recess.

22. The image forming apparatus according to claim 17, wherein the grounding plate comprises a planar portion and a plurality of drum contact members bent relative to the planar portion.

23. The image forming apparatus according to claim 17, the flange comprises a gear surface.

24. The image forming apparatus according to claim 23, wherein the gear surface is formed on a portion of the flange disposed outside of the drum.

25. The image forming apparatus according to claim 17, wherein the shaft contact member is bent.

26. The image forming apparatus according to claim 25, wherein the grounding plate comprises a plurality of shaft contact members.

27. The image forming apparatus according to claim 26, wherein the grounding plate comprises two shaft contact members.

28. The image forming apparatus according to claim 27, wherein free ends of the two shaft contact members are disposed between a surface of the interior of the flange and a planar surface of the grounding plate.

29. A photosensitive drum assembly for an image forming apparatus, comprising:

a drum defining first and second open ends;

a flange partially disposed in the first open end; and

a grounding plate assembly comprising a plurality of drum contact members and a shaft contact member, one of the drum contact members being longer than the

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other drum contact member, and the shaft contact member configured to contact a grounding shaft, the shaft contact member disposed entirely within an interior of the flange.